Document No. 3542
Voted at Meeting of 10/6/77

BOSTON REDEVELOPMENT AUTHORITY

AMENDMENT TO REPORT AND DECISION ON A PROJECT PREVIOUSLY AUTHORIZED AND APPROVED UNDER CHAPTER 121A OF THE MASSACHUSETTS GENERAL LAWS (TER. ED.), AS AMENDED, AND CHAPTER 652 OF THE ACTS OF 1960, AS AMENDED, WHICH PROJECT IS TO BE UNDERTAKEN AND CARRIED OUT BY AN URBAN REDEVELOPMENT CORPORATION UNDER THE NAME MEDICAL AREA TOTAL ENERGY PLANT, INC.

A. Prior Proceedings. Reference is made to the "Report and Decision on the Application for Authorization and Approval of a Project under Chapter 121A of the Massachusetts General Laws (ter. ed.), as Amended, and Chapter 652 of the Acts of 1960, as Amended, and for Consent to the Formation pursuant to said Chapter 121A of an Urban Redevelopment Corporation under the name Medical Area Total Energy Plant, Inc., for the Purpose of Undertaking and Carrying Out the Project" (the "Report and Decision") adopted by vote of the Authority at a meeting held October 9, 1975. All terms used herein shall have the same meanings as set forth in the Report and Decision, except that as used herein the term Applicants shall include Medical Area Total Energy Plant, Inc., the 121A Corporation referred to in the Report and Decision.

B. Amendments to Application. By a Second Amendment and a Third Amendment to the Application, each dated February 15, 1977, the Applicants have sought authorization and approval from the Authority for certain amendments to the Report and Decision. Copies of the Second Amendment (including a letter

dated June 27, 1977, further amending the Second Amendment) and the Third Amendment are attached hereto as Exhibits A and B, respectively.

C. The Hearing. A public hearing on the Second and Third Amendments was held at 7:30 p.m. on June 29, 1977 at Boston State College, Boston, Massachusetts. Due notice of said hearing had previously been given by publication on June 13 and June 20, 1977 in the Boston Herald American, a daily newspaper of general circulation published in Boston and on June 24, 1977 in The (Boston) Ledger. Robert L. Farrell, Chairman, Joseph J. Walsh, James Flaherty and James Cofield, members, were present on behalf of the Authority throughout the hearing.

D. Authority Action. In acting upon the requests for approval of the Second and Third Amendments and for appropriate amendments to the Report and Decision, the Authority has considered the Second and Third Amendments themselves and all documents, plans, and exhibits filed with or referred to therein, all of the documents, testimony and evidence submitted to the Authority, both in support of and in opposition to the Project and the Second and Third Amendments, whether received before or after the hearing, and certain reports prepared for the Authority by independent consultants.

The Report and Decision is hereby amended to the extent necessary to reflect the Second and Third Amendments to the Application, which are hereby approved. More particularly, the Report and Decision is hereby amended as follows:

1. Paragraph B, at page 2, lines 23-24 and page 3, lines 1-3. The words beginning "water to. . ." and ending ". . . recovery of condensate and solid waste from" are hereby deleted and the following substituted therefor: "water to, and the recovery of condensate and water from, the Member Institutions, as well as for the distribution of steam at 125 lbs. pressure (sufficient to supply heat, year round domestic hot water, and, by absorption units, chilled water) to, and the recovery of condensate return from . . . ."

2. Paragraph B, at page 3, line 8 through page 4, line 13. Subparagraphs (1) through (5)(v) are hereby deleted and the following subsituted therefor:

"(1) A concrete, steel and brick structure approximately 341 feet long, 229 feet wide, and 139 feet high from street level to the top of the cooling towers.

(2) A stack 29 feet in diameter and approximately 315 feet in height.

(3) A pedestrian way connecting Binney Street and Brookline Avenue along the northerly line of Peabody Street, which was recently discontinued as a public way.

(4) An office building along Brookline Avenue for use by MASCO, which corporation will lease the Project from the 121A Corporation.

(5) Major mechanical components for the production of electricity, steam and chilled water and the storage of inflammable liquids. These components consists of:

(i) Six diesel engine driven generators, one back-pressure turbine generator and two extraction-condensing steam turbine generators with an aggregate projected capacity of 74,592 kilowatts.

(ii) Three steam boilers with a projected capacity of 540,000 pounds per hour and two heat recovery steam generators with a projected capacity of 360,000 pounds per hour.

(iii) Two electric-driven 5,000-ton chillers, 2 steam turbine driven 5,000 ton chillers and one electric-driven 1,900-ton chiller.

(iv) Underground tanks for the storage of inflamable liquids with a projected capacity of 1,070,000 gallons of No. 6 oil (one of the 180,000-gallon No. 6 oil tanks may initially be used for No. 2 fuel oil), 24,000 gallons of No. 6 washed oil, 140,000 gallons of No. 2 fuel oil and 7,500 gallons of lube oil."

3. Paragraph B, at page 4, lines 14 through 17. The paragraph beginning "The improvements described. . ." and ending ". . .Exhibits E, F and G" is hereby deleted and the following substituted therefor: "The improvements described in Paragraphs B(1) through B(5)(iv) are more particularly described in the site plan, elevations, and floor plans of the Project which accompanied the Second Amendment as Exhibit H."

4. Paragraph D, at page 6, lines 16 through page 7, line 2. The three sentences beginning "Exhibit C to the Application . . ." and ending ". . .terms and conditions of Exhibit C." are hereby deleted and the following substituted therefor: "Attached as Exhibit K is a photocopy of a letter to the Authority from the Corporation Counsel confirming the Applicants' agreement to enter into a contract under Section 6A of Chapter 121A providing for payments to the City of Boston, including the excise under Section 10 of Chapter 121A, aggregating $1,500,000 annually over the 37-year period beginning April 15, 1980 (and appropriately reduced amounts during the period for construction of the Project), all such payments to be increased to reflect increases in the City of Boston tax rate above the current $252.90 per thousand dollars assessed valuation."

5. Paragraph E at page 7, line 6. The "$56,410,000.00" estimated cost of the Project is hereby deleted and figure "$109,430,144" substituted therefor.

6. Paragraph E 3, at page 9, line 16. The following is hereby added at the end of subparagraph E 3: "As an alternative, certain mechanical components of the Project may be long-term leased to the 121A corporation, either directly or under a sale/leaseback arrangement, or to third parties who will in turn lease to the operating lessee. Such financings may be accomplished through governmental bodies authorized to issue tax exempt revenue bonds or through conventional leasing

companies. Since amounts payable under the operating lease will be sufficient to enable the 121A corporation to meet its obligations under any such alternate leasing arrangements and since all payments under the operating lease and any other direct leases of Project components will be guaranteed by Harvard, the feasibility of the Project should not be adversely affected."

7. Paragraph E, at page 9, line 20. The following sentence is hereby added at the end of said Paragraph E: "The governing boards of the MASCO Member Institutions shall agree to take and pay for sufficient electrical power from the Project so as not, in the reasonable opinion of the Authority, to materially adversely affect the feasibility of the Project."

8. Paragraph G, at page 10, lines 17 and 18. The words "chilled water and incineration" are hereby deleted and the words "and chilled water" substituted therefor.

9. Paragraph I, at page 14. The amendments to Exhibit A to the Application as set forth in Paragraph 11 of the Second Amendment are hereby adopted and approved. Accordingly, although the building bulk, height, and yard deviations are already covered and have been changed only in degree, the following is hereby added between "Section 18-4" and "Article 23" to the table on page 14 of Zoning Code provisions as to which permission is granted to deviate:

"Section 21-1	Provides for the set back of building parapet from a street or lot line above a certain height"

The Authority specifically confirms as to the additional zoning deviations reflected by said Exhibit A, as amended, the findings set forth in the initial paragraph of said Paragraph I. Further in support of and without in any way limiting such findings, in addition to the matters set forth in Paragraph 11 of the Second Amendment, it is noted that the actual increase in building bulk in terms of cubic feet of building (exclusive of cooling towers) above grade will be only approximately 25%. The increased deviations are consonant with other nearby developments. Specifically, with respect to height and building bulk the new Affiliated Hospitals Center and Sidney Farber Cancer Center are comparable. Also, it should be noted that nearby buildings along Brookline Avenue in the L-1 district encroach upon the required yards to an even greater degree, without reservations for public open space comparable to those incorporated in the Project. Indeed, at the request of the Authority the Applicants have designed the Project to accommodate a potential future widening of Brookline Avenue and have, in a letter to the Public Improvement Commission of the City of Boston, agreed to waive damages in the event of a future taking by eminent domain for such purpose.

10. Paragraph I, at page 14, bottom. There is hereby added at the end of said Paragraph I the following paragraph:

"The Regulations of the City of Boston Air Pollution Control Commission for the Control of Noise in the City of Boston (the "Regulations") prescribe maximum noise levels at the boundaries

of the Project Area of 60 dB(A) during daytime hours (7:00 a.m. to 6:00 p.m. daily, except Sunday) and 50 dB(A) at all other times (at night and on Sundays). Based upon a review of the matters set forth at pages 10 through 12 of the Second Amendment and Exhibits I and J thereto, the Supplemental Environmental Impact Report hereinafter mentioned, other technical data submitted to the Department of Environmental Quality Engineering and the Authority and in an independent evaluation of cooling tower noise performed for the Authority, the Authority hereby finds: that despite the incorporation of silencers on the cooling towers and the use of other sound attenuation measures for other Project mechanical components at an aggregate cost exceeding $5,000,000, it is not economically or technically feasible to attain the standard for nighttime and Sundays on those infrequent occasions when the Project is operating at high load demand and at high atmospheric ambient climatological (wet bulb) conditions; that existing ambient noise levels at nights and on Sundays consistently exceed the applicable 50 dB(A) standard; that the maximum increase of Project noise above existing ambient noise levels will be less than that allowed under state noise guidelines; and therefore that the requested deviation may be granted without substantially derogating from the intent and purposes of the Regulation. It is further noted that the Authority has solicited the views of the Commission, which has approved the requested deviation with certain conditions which we are advised by the Applicants will be met. Accordingly,

permission is hereby granted for the Project to deviate from the Regulations so as to require only that the Project meet but not exceed the weighted average daytime standard of 60dB(A) at all abutters' lot lines (as that term is defined in the Boston Zoning Code) up to a height of 200 feet above grade."

D. Environmental Findings. The Authority hereby finds that the changes in the Project contemplated by the Second and Third Amendments will have the impacts on the environment described in "Supplementary Information for the Final Environmental Impact Report - Medical Area Total Energy Plant, Boston, Massachusetts" (the "Supplemental Environmental Impact Report") dated April 29, 1977, which Report was submitted jointly to the Secretary of Environmental Affairs by the Authority and the Department of Environmental Quality Engineering under Section 62 of Chapter 30 of the General Laws. The Supplemental Environmental Impact Report was the subject of a public community informational meeting held by the Authority at 7:30 p.m. at American Legion Post 327, 1617 Tremont Street, Boston on May 24, 1977 of which notices were published in the Boston Herald American on May 16 and 23, 1977, and mailed by the Authority to selected interested parties and community groups. On June 6, 1977, the Secretary of Environmental Affairs issued a statement, subject to certain conditions noted in an accompanying memorandum, that the Supplemental Environmental Impact Report

adequately and properly complies with said Section 62 and the regulations governing the preparation of environmental impact reports.

The Authority hereby finds that all feasible measures have been taken to avoid or minimize the impacts of the Project upon the environment. Without in any way limiting the generality of the foregoing finding, the Authority notes particularly that: in compliance with the conditions stated in the above-mentioned memorandum of the Secretary of Environmental Affairs, MASCO has committed to pursue diligently the planning of short term waste management programs and long term solid waste reduction and resource recovery programs like those outlined in the Supplemental Environmental Impact Report and to make appropriate recommendations to its member institutions as to the implementation of such programs and MASCO and the 121A Corporation have committed to implement the air quality monitoring program which has been approved by the Division of Air and Hazardous Materials of the Department of Environmental Quality Engineering; with respect to the deviation from the Regulation for the Control of Noise in the City of Boston granted by paragraph D 8 hereof, a report prepared for the Authority by Parsons, Brinckerhoff, Quade and Douglas, Inc., dated July 20, 1977, concluded, among other things, that current designs for the cooling towers ". . .will produce the lowest noise level. . .that can be anticipated considering the present state of cooling tower design"; and, lastly, that questions of the air

impacts of the Project, including nitrogen oxides emissions, are also within the jurisdiction and more within the expertise of the Department of Environmental Quality Engineering, before which an application for approval of the plans and operating procedures of the Project is currently pending.

E. No Fundamental Change. The Authority hereby finds that none of the matters contemplated by the Second and Third Amendments consistutes a fundamental change in the Project or in the type or character of the buildings on the Project.

Section 13 of Chapter 652 of the Acts of 1960 would require the Authority to proceed with the Second and Third Amendments as if they were an application for original approval of the Project only if in the opinion of the Authority any of the proposed changes in the type or character of the buildings on the Project were fundamental. However, even in the instance of an application for original approval said Section 13 requires only that the application contain "in general terms a description of the buildings, structures or facilities which it is proposed to furnish, . . ." (emphasis added) and that it be accompanied by a "site plan and drawings of the proposed buildings and other improvements adequate to show the nature and extent of the project" (emphasis added). A visual comparison of the models of the Project as originally approved and as redesigned confirms that none of the changes in the Project contemplated by the Second and Third Amendments involves even a substantial, much less a fundamental, change in the type or character of the

buildings on the Project or in the nature and extent of the Project. Photographs of the models were included as figures 9-1 and 9-2 in the Supplemental Environmental Impact Report. The height of the overall Project will increase from 106 feet to 139 feet above grade, most of which increase is necessary by reason of sound attenuation equipment added to the cooling towers. There will be no substantial change of use of the Project. The Project will still serve the same demands from the same users for electricity, steam and chilled water. To be sure, for the economic, environmental and practical reasons stated therein, the Third Amendment eliminates the centralized mechanical collection and incineration systems for solid wastes. However, this elimination will have no effect on the total energy concept since the fuel economies which the Applicants originally anticipated would be achievable by use of waste heat from incineration were determined to be negligible; further, the incineration of solid waste in the Project Area would have involved substantial emissions of particulate matter, thus partially vitiating the air quality benefits of electrostatic precipitators which were added by the Second Amendment to further control particulates emissions. The increase in the estimated cost of the Project relates primarily to the engineering costs of redesign, the cost of additional equipment and the somewhat larger structure called for by such redesign, the cost of

additional pollution control equipment, the cost of inflation due to delays, additional legal fees, and the additional financing costs attributable to these other increases.

Except to the extent inconsistent herewith, all findings, determinations, approvals and consents as set forth in the Report and Decision are hereby ratified and confirmed.

EXHIBIT "A"

MEDICAL AREA TOTAL ENERGY PLANT

Second Amendment to Application for Authorization and Approval of a Project Under Mass. G.L. (Ter. Ed.) Chapter 121A, as Amended, and Chapter 652 of the Acts of 1960, and for Consent to the Formation of a Corporation to be Organized Under the Provisions of said Chapter 121A

Reference is hereby made to an "Application for Authorization and Approval of a Project Under Mass. G.L. (Ter. Ed.) Chapter 121A, as amended, and Chapter 652 of the Acts of 1960, and for Consent to the Formation of a Corporation to be Organized under the Provisions of said Chapter 121A" dated July 1, 1975, as amended pursuant to a letter dated August 25, 1975, and a First Amendment dated October 1, 1975, (collectively, "the Application").

All terms used herein shall have the same meanings as set forth in the Application, except that as used herein the term Applicants shall include Medical Area Total Energy Plant, Inc., the 121A Corporation contemplated by the Application.

Accompanying this Second Amendment as Exhibit H are a site plan, sections, elevations, and floor plans of the operating levels of the Facility, all supplanting Exhibits E and F to the Application and reflecting refinements to the design of the Facility; while Exhibit H reflects a likely final design, the cooling towers might need to be redesigned if an alternate manufacturer is selected; a maximum cooling tower envelope (shown by dotted lines) has therefore been superimposed on the drawings. The Applicants hereby seek authorization and approval of the Authority of amendments to its Report and Decision dated August 9, 1975 to

the extent necessary to reflect the amendments to the Application hereinafter set forth, to permit the construction of the Facility as so redesigned and to take account of other changed circumstances. More particularly, the Application is hereby amended as follows:

1. Paragraph 5, at page 5, lines 6-8. The words "as well as for . . . the Mission Park Housing Project," are hereby deleted and the following are substituted therefor: "as well as for the distribution of steam at 125 lb. pressure (sufficient to supply heat, year-round domestic hot water, and, by absorption units, chilled water) to and the recovery of condensate return from, the Mission Park Housing Project . . . ." Similarly, the language in Paragraph 9 at the beginning of the first full paragraph on page 18 is hereby corrected so as to correspond to this amendment.

2. Paragraph 5. The first paragraph beginning on page 6 and continuing on page 7 is deleted and the following is substituted therefor: "As shown in the plans attached hereto as Exhibit H, the principal elements of the Facility, which will occupy almost all of the Project Area, will be a concrete, steel and brick plant structure approximately 341 feet long, 229 feet wide, and up to 145 feet high from mean grade to the top of the cooling towers; a stack approximately 29 feet in diameter and approximately 315 feet in height; a pedestrian way connecting Binney Street and Brookline Avenue along the northeasterly line of what was formerly Peabody Street,

recently discontinued as a public way; a MASCO plant office building along Brookline Avenue and major mechanical components for the production of electricity, steam and chilled water, for the incineration of solid waste and for the storage of inflammable liquids, which are outlined as follows:

	INITIAL COMPONENTS	PROJECTED INSTALLED CAPACITY
Electricity	6 diesel engine driven generators, 1 back-pressure turbine generator and 2 extraction-condensing steam turbine generators	74,592 KW
Steam	3 steam boilers	540,000 lb/hr
	2 heat recovery steam generators	360,000 lb/hr
Chilled Water	2 electric driven 5,000-ton chillers, 1 electric driven 1,900-ton chiller, and 2 steam turbine driven 5,000-ton chillers (only three 5,000-ton chillers will normally operate simultaneously with the 1,900-ton chiller)	16,900 tons
Refuse Incinerators	3 units	60 tons/day
Inflammable Liquids/Storage	underground tanks	1,070,000 gallons No. 6 oil, 24,000 gal. No. 6 washed oil, 140,000 gal. No. 2 fuel oil, and 7,500 gal. of lube oil.

Note: One 180,000-gal. No. 6 oil tank may initially be used for No. 2 fuel oil.

3. Paragraph 7, at page 8. The minimum estimated cost of the Project is hereby amended to read "Sixty-Six Million Eight Hundred Thousand ($66,800,000)."

4. Paragraph 8, at pages 8-15. In general the basic arrangements for the financing of the Project will remain unchanged. Accordingly, it is anticipated that in excess of twenty percent (20%) of the Estimated Cost of the Project will be provided as a contribution to equity and the balance by a first mortgage Permanent Loan pursuant to the arrangements described in Paragraph 8. However, the Estimated Cost of the Project is now One Hundred Nine Million Four Hundred Thirty Thousand One Hundred Forty-four Dollars ($109,430,144), an increase which has led the Applicants to consider the possibility of a long-term lease (either directly or under a sale/leaseback arrangement) of certain of the Project components from third parties or the lease of such components to third parties who will in turn lease to MASCO. Potential lessors and lessees could include governmental bodies authorized to issue tax exempt revenue bonds as well as conventional leasing companies engaged in such arrangements on a regular basis. Rentals payable by MASCO under the MASCO Lease or leases would in any event be sufficient to enable the 121A Corporation to meet its obligations under any such alternate leasing arrangements. All Lease payments will continue to be guaranteed by Harvard. Accordingly, approval is sought for the increase in Estimated Cost of the Project and for the above-described

alternative financing arrangements, which will not in the opinion of the Applicants adversely affect the feasibility of the Project.

5. Paragraph 9, at page 16, line 5. The balance of the sentence, beginning with the words "and their peak steam requirements . . ." are hereby deleted and the following is substituted therefor: "and by 1980 their requirements for steam will be 1.5 times, and for chilled water 2.8 times, the firm capacity of the existing plant."

6. Paragraph 9, at page 16, line 23. The number "10,500,000" is hereby delcted and the following is substituted therefor: "approximately two million" .

7. Paragraph 9, at page 17, last 2 lines. The words ". . . particulates . . . vapor plume; . . ." are hereby deleted and the following substituted therefor: ". . . particulates attributable to lower fuel consumption and the use of air pollution control devices; elimination of virtually all visible vapor plume; . . . ."

8. Paragraph 9, at page 18, first 3 lines. The words ". . . of over . . . sewers; . . ." are hereby deleted and the following substituted therefor: ". . . of approximately 153 million gallons of condensate and an additional 76 million gallons of fresh water coolant per year (in 1980) into City of Boston sewers; . . . ."

9. Paragraph 9, at page 18, line 5. The number "3,400" is hereby deleted and the following substituted therefor: "up to 500".

10. Paragraph 9, at page 18, line 9. The design criteria for cooling tower noise remains at 50 dB(A) as measured at street level at the boundaries of the Facility. The design criterion for the total noise emissions of the plant has been established at 60 dB(A) at abutters' lot lines. In this connection, see paragraph 11 of this Second Amendment, adding Part II to Exhibit A and, among other things, requesting permission from the Authority for the Project to deviate from the literal requirements of the Regulations for the Control of Noise in the City of Boston as promulgated by the Boston Air Pollution Control Commission.

11. Paragraph 13, at page 20. Paragraph 13 incorporated by reference an Exhibit A, the statement of all permissions which, so far as then known to the Applicants, would be required for the Project to deviate from zoning, building, health and fire laws, codes, ordinances and regulations in effect in or applicable to the City of Boston. It now appears that construction and operation of the Facility as redesigned will require additional technical deviations from the provisions of the City of Boston Zoning Code, as amended (the "Code") relating to building bulk (floor area ratio), height, yards and parapet setback and a deviation from the requirements of the Boston Air

Pollution Control Commission's Regulation for the Control of Noise in the City of Boston (the "Regulation").

Paragraph I2 of Exhibit A is hereby amended beginning at page 3 thereof under the heading "Building Bulk" to reflect potential increases in the total building bulk for the Project to 195,000 square feet of gross floor area as defined in the Code, 59,100 of which will be located in the L-1 zoning district and 135,900 of which will be located in the H-3 zoning district. The resulting maximum floor area ratios are 2.52 in the L-1 district and 2.66 in the H-3 district, and an overall maximum floor area ratio for the entire Project Area of 2.61. Accordingly, while it continues to be accurate that no deviation is required for that portion of the Project located in the H-3 district (more than two-thirds of the Project Area), a greater deviation from building bulk requirements is required for that portion situated in the L-1 district than originally requested.

It should be noted that the total building bulk of the redesigned Project exceeds by only about nine percent the total gross floor area allowable in the Project Area under the Code and that it is about thirty-five percent less than that which would have been allowable had it been necessary to rezone the H-3 portion of the Project Area to B-4 as was contemplated by the Fenway Urban Renewal Plan. Further, it should be noted that the Applicants have encountered a considerable construction cost premium as a result of having situated as much of the additional

building bulk below grade as is possible without encountering the water table. Of the new gross floor area added to the Project from that originally contemplated by the Application, 37,600 square feet are below grade and therefore not "visible." Over 71,000 square feet, or almost forty percent, of the gross floor area of the redesigned Project is below grade, resulting in an "exposed" floor area ratio of about 1.65 in each district. It should also be noted that over 21,000 square feet of the gross floor area of the redesigned Project represents truck loading areas, oil storage areas, and office building basement which are arguably excludable from gross floor area as defined in the Code. For these reasons, as well as those set forth in Paragraph I2 of the original Exhibit A under the heading "Building Bulk," the Applicants believe that the requested additional deviation will not derogate from the intent or spirit of the Code.

Similarly, in Paragraph I2 of Exhibit A beginning on page 5 under the heading "Height," the maximum height as therein defined for the portion of the Project situated in the L-1 district as set forth on page 6, line 1, is hereby amended to read "49 feet" instead of "42 feet, 6 inches."

Also in Paragraph I2 of Exhibit A, the first full paragraph on page 7 under the heading "Yards" is hereby deleted and amended to read as follows: "Under Table B of § 13-1 and § 18-1 of the Code a front yard with a minimum depth

of 10 feet is required along Brookline Avenue in the L-1 district. Since the office structure will encroach upon this required yard, a deviation is requested from the terms of Article 18 as applied to the Project. However, it should be noted that there will be a greater amount of open space at the pedestrian level than required. At the intersection of the proposed pedestrian way along what was previously Peabody Street, there will be a pedestrian plaza containing over 1,800 square feet, about 1,750 square feet of which, an area 45 feet by 39 feet, will be open to the sky. Similarly, at the intersection of Brookline Avenue and Francis Street there will be another landscaped open area for pedestrians. This latter area will contain about 3,500 square feet, approximately fifty percent of which will be open to the sky, and would be even larger except that it does not include an area which has been reserved at the request of the Authority for a street (truck turning) easement. An additional 2,000 square feet of open areas have been created at the pedestrian level by revisions of the design to include a widening of the paved area along Francis Street, about thirty-five percent of which is open to the sky."

A new paragraph is hereby added to Paragraph I2 of Exhibit A as follows: "Parapet Setback. One result of the effort to keep the loading areas for fuel trucks inside the

Facility and screened visually and physically from the street is that under Section 21-1 of the Code, relating to parapet setback, that portion of the exterior wall of the truck bay above 25 feet from surface grade would be required to be set back from the street line by as much as 16 feet. The Applicants hereby request permission for the Project to deviate from the parapet setback requirements of the Code in this minimal respect."

A new Part II is hereby added to Exhibit A as follows:

"II. Boston Air Pollution Control Commission; Regulations for the Control of Noise in the City of Boston (the "Regulation"). Regulation 3.2 requires the application of the "Residential District Noise Standard" of Regulation 3.5 "at any lot located in Residential Zoning District or in residential or institutional use elsewhere in conformance with the Boston Zoning Code." Accordingly it is arguable that despite the nature of the zoning deviation sought pursuant to Part I of this Exhibit A, the Residential District Noise Standards of Regulation 3.5 apply to the Project because of the zoning of the abutting areas. To the extent this standard is properly applied, Regulation 3.5 would prescribe a maximum noise level measured at the boundaries of the Project Area of 60 dB(A) between 7:00 a.m. and 6:00 p.m. daily except Sunday and 50 dB(A) at night and on Sundays. The reliance upon zoning district boundaries, especially where there is no corresponding reliance upon the possibility of variances from the terms of the Code itself to permit nonresidential uses in residential zoning districts, creates the potential for arbitrary

and inequitable application of the Regulation of different uses. And this potential approaches a constitutional infirmity where, as with the Regulation, there is no provision for variances except temporary variances expiring in one year.

The 121A Corporation is advised by its engineering consultants, United Engineers & Constructors, Inc., that although the Project has been designed to include mufflers and other sound attenuation equipment costing in excess of $5,000,000, it is not economically or technically feasible to attain the standard of 50 dB(A) within the specified individual octave bands as prescribed by the Regulation for nights and Sundays. Accordingly, permission is sought to construct the Project using cooling towers and noise control equipment which will meet the weighed average daytime standard of 60 dB(A) at and beyond all abutters' lot lines (as defined in the Code) up to a height of 200 feet above grade. Accompanying this Second Amendment as Exhibits I and J, respectively, are photocopies of §§ 2.2 and 3.3 of United Engineers' Application to the state Department of Environmental Quality Engineering for Air Quality Plans Approval, dated January 24, 1977, as amended, § 2.2 being the results of their survey of ambient noise in the vicinity of the Project Area and § 3.3 being a report setting forth their advice as to noise design criteria for the Facility and explaining why it is believed that the requested deviation can be granted without derogating from the intent or purpose of the Regulation.

Briefly summarized, it is demonstrable, based upon noise readings taken at the site and environs eleven times during July and August of 1976, including four readings at night, that the existing noise levels at the boundaries of the Project Area consistently exceed those specified by the Regulation. The lowest residual noise level measured in the immediate vicinity of the Project was 51.5 dB(A) along Francis Street at 2:40 a.m. on one occasion. Under the design criteria which would obtain for the Facility under the deviation hereby requested, even in the hypothetical worst case of a patient in a hospital room having open windows and located at the most sensitive elevation and right at the nearest abutting lot line, the increase above the lowest residual noise level when the Facility and cooling towers are operating at full capacity will be less than 7 dB. By way of comparison, the Commonwealth of Massachusetts Noise Guidelines permit new noise sources if they will not result in increased noise levels of more than 10 dB above the lowest residual ambient and if the new noise source does not have an objectionable tonal quality. The noise design criteria for the Facility and the planned noise control measures will preclude any objectionable tonal components.

Also accompanying this Second Amendment is an environmental assessment form pursuant to Section 62 of Chapter 30 of the General Laws and the regulations of the Authority and the Executive Office of Environmental Affairs thereunder. The

Applicants respectfully request that the Authority find that none of the foregoing amendments represents any potential for damage to the environment and that all feasible measures have been taken to avoid or minimize environmental impact.

The Applicants further respectfully request that the Authority find that none of the foregoing amendments to the Application as contained in this Second Amendment is fundamental.

Executed this 15th day of February , 1977.

MEDICAL AREA TOTAL ENERGY PLANT, INC.

By _____
John W. Dewey, President

CITICORP TRANSLEASE, INC.

By _____
John W. Dewey, President

PRESIDENT AND FELLOWS OF HARVARD COLLEGE

By _____
Thomas O'Brien, Acting Financial Vice President

MEDICAL AREA SERVICE CORPORATION

By _____
Rudman J. Ham, President

_____
L. Edward Lashman, Jr.

THE STATE OF NEW YORK

New York , ss.

On this 17th day of February , 1977, before me appeared John W. Dewey , to me personally known, who being duly sworn, did say that he is the President , of Medical Area Total Energy Plant, Inc., that he has authority to execute the foregoing Amendment on behalf of Medical Area Total Energy Plant, Inc., and that to the best of his knowledge and belief the statements contained in said Amendment are true.

Claudean Williams
Notary Public
My commission expires:

CLAUDEAN WILLIAMS
Notary Public, State of New York
No. [illegible] Qualified in Bronx Co.
Cert. Filed in New York County
Commission Expires March 31, 1977

THE COMMONWEALTH OF MASSACHUSETTS

Middlesex , ss.

On this 24th day of February , 1977, before me appeared Thomas O'Brien , to me personally known, who being duly sworn, did say that he is the Acting Financial Vice President of President and Fellows of Harvard College, that he has authority to execute the foregoing Amendment on behalf of President and Fellows of Harvard College, and that to the best of his knowledge and belief the statements contained in said Amendment are true.

James A. Sharaf
Notary Public
My commission expires:

JAMES A. SHARAF, NOTARY PUBLIC
MY COMMISSION EXPIRES JAN. 16, 1981

THE COMMONWEALTH OF MASSACHUSETTS

Suffolk , ss.

On this 24th day of February , 1977, before me appeared Rudman J. Ham , to me personally known, who did affirm that he is the President of Medical Area Service Corporation that he has authority to execute the foregoing Amendment on behalf of Medical Area Service Corporation, and that to the best of his knowledge and belief the statements contained in said Amendment are true.

Roger Allan Moore
Notary Public
My commission expires:

ROGER ALLAN MOORE, NOTARY PUBLIC
My Commission Expires Dec. 9, 1977

THE STATE OF NEW YORK

New York , ss.

On this 17th day of February , 1977, before me appeared John W. Dewey , to me personally known, who being duly sworn did say that he is the President of Citicorp Translease, Inc., that he has authority to execute the foregoing Amendment on behalf of Citicorp Translease, Inc. and that to the best of his knowledge and belief the statements contained in said Application are true, before me,

Claudean Williams
Notary Public
My commission expires:

CLAUDEAN WILLIAMS
Notary Public, State of New York
No. 4511613 Qualified in Bronx Co.
Cert. Filed in New York County
Commission Expires March 31, 1977

THE COMMONWEALTH OF MASSACHUSETTS

Suffolk , ss.

On this 24th day of February , 1977, before me appeared L. Edward Lashman, Jr., to me personally known, and that to the best of his knowledge and belief the statements contained in said Amendment are true.

Roger Allan Moore
Notary Public
My commission expires:

ROGER ALLAN MOORE, NOTARY PUBLIC
My Commission Expires Dec. 9, 1977

MEDICAL AREA TOTAL ENERGY PLANT, INC.
900 HOLYOKE CENTER
CAMBRIDGE, MASSACHUSETTS 02138

June 27, 1977

Boston Redevelopment Authority
City Hall
One City Hall Square
Boston, Massachusetts 02201

Attention: Charles J. Speleotis, Esq.

Gentlemen:

Reference is made to the Second Amendment dated February 15, 1977, to the Application, as therein defined, for so-called Chapter 121A approvals in connection with the proposed Medical Area Total Energy Plant.

On behalf of the Applicants and Medical Area Total Energy Plant, Inc., I am pleased to confirm that cooling tower designs will conform substantially to the current design objective, and in particular that cooling tower height will not exceed that reflected in Exhibit H to the Second Amendment; without regard to the so-called "maximum cooling tower envelope" referred to in the Second Amendment and shown by dotted lines on said Exhibit H.

Accordingly, the Second Amendment is hereby further amended to delete all references to such maximum cooling tower envelope and to delete the dotted lines reflecting said envelope on said Exhibit H; further, the height of the Facility, as set forth in Paragraph 2 of the Second Amendment amending Paragraph 5 of the Application, is hereby changed to read " . . . 139 feet from mean grade to the top of the cooling towers ..." rather than 145 feet as it now reads.

Very truly yours,

L. Edward Lashman, Jr.
Applicant
Vice President, Medical Area
Total Energy Plant, Inc.

LEL/wlj

EXHIBIT "B"

MEDICAL AREA TOTAL ENERGY PLANT

Third Amendment to Application for Authorization and Approval of a Project Under Mass. G.L. (Ter. Ed.) Chapter 121A, as Amended, and Chapter 652 of the Acts of 1960, and for Consent to the Formation of a Corporation to be Organized Under the Provisions of said Chapter 121A

Reference is hereby made to an "Application for Authorization and Approval of a Project Under Mass. G.L. (Ter. Ed.) Chapter 121A, as amended, and Chapter 652 of the Acts of 1960, and for Consent to the Formation of a Corporation to be Organized under the Provisions of said Chapter 121A" dated July 1, 1975, as amended pursuant to a letter dated August 25, 1975, a First Amendment dated October 1, 1975, and a Second Amendment of even date and delivery herewith (collectively, "the Application").

All terms used herein shall have the same meanings as set forth in the Application, except that as used herein the term Applicants shall include Medical Area Total Energy Plant, Inc., the 121A Corporation contemplated by the Application.

In refining designs for the Project, the Applicants have reevaluated the advisability of centralized mechanical collection and incineration of solid waste from the Masco member institutions. The Division of Air and Hazardous Materials of the Department of Environmental Quality Engineering and the community have expressed concern at any avoidable emissions of particulate matter into what the Division has designated to be a non-attainment area for

such pollutants. Questions as to the practicality and reliability of such solid waste and incineration systems, together with their lack of compatibility with certain kinds of hospital wastes, would require that conventional waste collection by truck for remote disposal be continued to some degree. Further, as is discussed more fully in the environmental impact report accompanying this Third Amendment, it has been determined that the number and frequency of truck trips presently required for solid waste removal which would be obviated by the centralized systems are not nearly so great as originally estimated, and that Masco is uniquely suited to coordinate the improvement of existing conventional efforts with a view toward meaningful economies. On the other hand, there would appear to be no fuel savings or other efficiencies available in fulfillment of the total energy concept by way of useful heat recovery from the incineration system; the costs of constructing, operating and maintaining the centralized systems as part of the Project will not be even partially offset by fuel savings. Accordingly, the Applicants have determined to apply to amend the Application to delete all references to any provisions in the Project for centralized mechanical (pneumatic) collection and incineration of solid wastes from the Masco member institutions. The Applicants hereby seek authorization and approval of the Authority for further amendments to its Report and Decision dated August 9, 1975, to the extent necessary to reflect such amendments. More particularly, the Application is hereby amended as follows:

1. Paragraph 5, at page 5, lines 4 and 5. The words "water and, by pneumatic pipes, of solid waste" are hereby deleted and the words "and water" are substituted therefor.

2. Paragraph 5, at page 5, line 8. The words "and solid waste" are hereby deleted.

3. Paragraph 5, at page 5, lines 16 and 17. The words "chilled water and solid waste incineration" are hereby deleted and the words "and chilled water" are substituted therefor.

4. Paragraph 5, at page 6, line 24 and page 7, line 1. The words "for the incineration of solid waste" are hereby deleted.

5. Paragraph 5, at page 7, table. The words "Refuse Incinerators 2 units - 40 tons/day" are hereby deleted.

6. Paragraph 9, at page 18, lines 3 through 7. The balance of the sentence, beginning with "and net reductions . . ." is hereby deleted and the semicolon after the words "sewers" in line 3 deleted and a period substituted therefor.

Accompanying this Third Amendment are an environmental assessment form and an environmental impact report pursuant to Section 62 of Chapter 30 of the General Laws and the regulations of the Authority and the Executive Office of Environmental Affairs thereunder. The Applicants respectfully request that the Authority find that none of the foregoing amendments represent any potential for damage to the environment and that all feasible measures have been taken to avoid or minimize environmental impact.

The Applicants further respectfully request that the Authority find that none of the foregoing amendments to the Application as contained in this Third Amendment is fundamental.

Executed this 15th day of February, 1977.

MEDICAL AREA TOTAL ENERGY PLANT, INC.

By _____
John W. Dewey, President

CITICORP TRANSLEASE, INC.

By _____
John W. Dewey, President

PRESIDENT AND FELLOWS OF HARVARD COLLEGE

By _____
Thomas O'Brien, Acting Financial Vice President

MEDICAL AREA SERVICE CORPORATION

By _____
Rudman J. Ham, President

_____
L. Edward Lashman, Jr.

THE STATE OF NEW YORK

New York, ss.

On this 17th day of February, 1977, before me appeared John W. Dewey, to me personally known, who being duly sworn, did say that he is the President, of Medical Area Total Energy Plant, Inc., that he has authority to execute the foregoing Amendment on behalf of Medical Area Total Energy Plant, Inc., and that to the best of his knowledge and belief the statements contained in said Amendment are true.

Claudean Williams
Notary Public
My commission expires:

CLAUDEAN WILLIAMS
Notary Public, State of New York
No. 4511610 Certified in Bronx Co.
Cert. Filed in New York County
Commission Expires March 31, 1977

THE COMMONWEALTH OF MASSACHUSETTS

Middlesex, ss.

On this 24th day of February, 1977, before me appeared Thomas O'Brien, to me personally known, who being duly sworn, did say that he is the Acting Financial Vice President of President and Fellows of Harvard College, that he has authority to execute the foregoing Amendment on behalf of President and Fellows of Harvard College, and that to the best of his knowledge and belief the statements contained in said Amendment are true.

James A. Sharaf
Notary Public
My commission expires:

JAMES A. SHARAF, NOTARY PUBLIC
MY COMMISSION EXPIRES JAN. 16, 198

THE COMMONWEALTH OF MASSACHUSETTS

Suffolk, ss.

On this 24th day of February, 1977, before me appeared Rudman J. Ham, to me personally known, who did affirm that he is the President of Medical Area Service Corporation that he has authority to execute the foregoing Amendment on behalf of Medical Area Service Corporation, and that to the best of his knowledge and belief the statements contained in said Amendment are true.

Roger Allan Moore
Notary Public
My commission expires:

ROGER ALLAN MOORE, NOTARY PUBLIC
My Commission Expires Dec. 9, 1977

THE STATE OF NEW YORK

New York , ss.

On this 17th day of February , 1977, before me appeared John W. Dewey , to me personally known, who being duly sworn did say that he is the President of Citicorp Translease, Inc., that he has authority to execute the foregoing Amendment on behalf of Citicorp Translease, Inc. and that to the best of his knowledge and belief the statements contained in said Application are true, before me,

Claudean Williams
Notary Public
My commission expires:

CLAUDEAN WILLIAMS
Notary Public, State of New York
No. 4511613 Qualified in Bronx Co.
Cert. Filed in New York County
Commission Expires March 31, 1977

THE COMMONWEALTH OF MASSACHUSETTS

Suffolk , ss.

On this 24th day of February , 1977, before me appeared L. Edward Lashman, Jr., to me personally known, and that to the best of his knowledge and belief the statements contained in said Amendment are true.

Roger Allan Moore
Notary Public
My commission expires:

ROGER ALLAN MOORE, NOTARY PUBLIC
My Commission Expires Dec. 9, 1977

CITY OF BOSTON

HERBERT P. GLEASON
Corporation Counsel

LAW DEPARTMENT

CITY HALL
BOSTON, MASSACHUSETTS 02201
(617) 725- 4017

September 21, 1977

Robert F. Walsh, Director
Boston Redevelopment Authority
1 City Hall Square, 9th Floor
Boston, Massachusetts 02201

Re: Medical Area Total Energy Plant

Gentlemen:

This will confirm to the Authority that the Applicants for approval under Chapter 121A of an amendment to their previously approved application for the proposed Medical Area Total Energy Plant have reached an agreement with the City of Boston as to the amounts which would be payable to the City by the 121A Corporation for forty (40) years after its organization in excess of the excise payable under Section 10 of said Chapter 121A.

The sum of said excise and the additional amounts so payable will be $1,500,000 annually, starting in fiscal year 1980, based upon construction costs attributable to real estate and equipment to be used in the generation of electricity. This amount will be increased in proportion to any increase in the tax rate over the present $252.90/$1,000. Prior to 1980, the Applicants will pay $1,125,000 in both fiscal years 1978, and 1979, the 1979 payment being increased in proportion to any tax rate increase.

The details of this Agreement, which have been reached orally by representatives of the Applicants and the Mayor's Office, after consultations with the Commissioner of Assessing, will be reduced to a formal contract in the form required by Section 6A of Chapter 121A in the near future.

Very truly yours,

Herbert P. Gleason

HPG:dk

Corporation Counsel

October 6, 1977

MEMORANDUM

as Amended

TO: BOSTON REDEVELOPMENT AUTHORITY

FROM: ROBERT F. WALSH, DIRECTOR

SUBJECT: REPORT AND DECISION ON SECOND AND THIRD AMENDMENTS TO THE CHAPTER 121A APPLICATION OF THE MEDICAL AREA TOTAL ENERGY PLANT, INC.

On October 9, 1975, the Authority approved the project and consented to the formation of the Medical Area Total Energy Plant, Inc., as an urban redevelopment corporation under Chapter 121A as amended and Chapter 652 of the Acts of 1960. Since the approval of the project and consent to the 121A entity, the applicants have proceeded to develop final engineering and development plans. As a result of final studies, it was necessary to request certain changes in the original approval which would reflect the final plans so developed.

A Supplementary Environmental Impact Report was prepared and submitted jointly by the Authority and the Department of Environmental Quality Engineering to the Secretary of Environmental Affairs. The Secretary duly approved the Supplementary Environmental Impact Report on June 6, 1977. An environmental review meeting was held in the community on May 24, 1977. A public hearing was held at Boston State College on Wednesday, June 29, 1977, at 7:30 p.m. to afford all interested parties an opportunity to comment on the proposed amendments.

After a review of the amendments and the information supplied at the public hearing, it has been determined that the amendments do not substantially affect the original proposal to build a power plant which will produce steam, electricity, and chilled water for the medical and educational institutions in the area. The amendments do call for the removal of systems for collection and incineration of solid waste and a change of certain equipment within the plant which was necessitated by the refinement of engineering data. Although the gross floor area of the plant has increased and the cost of the facility has changed from $56M to $109M, the Authority does not consider the changes as being fundamental as the type, character, nature and extent of the improvements called for in the original application remain the same. The project will still basically provide steam, electricity, and chilled water for the identical users and demand. The Authority has reviewed all final data submitted by the applicants and finds the financial plan still to be feasible despite the increase in cost.

It should be noted that matters concerning air quality impacts of the project, including nitrogen oxides emissions, are within the jurisdiction and expertise of the Department of Environmental Quality Engineering, before which an application for approval of the plans and operating procedures of the project is currently pending. The proposed action of the Authority in no way affects the necessity of the Applicants to secure this approval

The proposed Amendment to the Report and Decision requires the Governing Boards of the MASCO Member Institutions to agree to take and pay for sufficient electrical power from the Project so as not, in the reasonable opinion of the Authority, to affect the feasibility of the Project.

It is therefore recommended that, pursuant to Chapter 121A of the General Laws, as amended, the Authority adopt the Amendment To The Report and Decision approving the second and third amendments as submitted with a finding that the changes evidenced by the amendments do not constitute a fundamental change from the original application.

An appropriate Vote follows:

VOTED: That having considered those documents entitled Second and Third Amendments to Application for Authorization and Approval of a Project Under Mass. G.L. (Ter.Ed.) Chapter 121A, as Amended, and Chapter 652 of the Acts of 1960, and for Consent to the Formation of a Corporation to be Organized under the Provisions of said Chapter 121A, which documents are dated February 15, 1977, and for the reasons set forth therein and supporting documents and based upon additional documentation and evidence presented at the public hearings and submitted thereafter, the Authority hereby approves the same and adopts that document presented at this meeting entitled "Amendment To Report And Decision On A Project Previously Authorized And Approved Under Chapter 121A Of The Massachusetts General Laws (Ter.Ed.), As Amended, And Chapter 652 Of The Acts Of 1960, As Amended, Which Project Is To Be Undertaken And Carried Out By An Urban Redevelopment Corporation Under The Name Medical Area Total Energy Plant, Inc.", it being determined that said Second and Third Amendments do not constitute a fundamental change from the original Application

dated July 1, 1975, as amended by the First Amendment, for which a Report and Decision was adopted by the Authority on October 9, 1975. This vote is conditioned upon the execution of a tax agreement between MATEP and the city, as described in Paragraph 4 of the Report and Decision.

amend-ment